

REMARKS

Currently, Claims 1, 3, 8-13, 18-21, 24 and 26-37 are pending in the present application.

Claims 1, 8, 9, 11, 12, 18-21, 24, 26, 30, and 33-36 have been initially rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Pat. No. 6,024,089 to Wallace et al. ("Wallace"). Claims 10 and 29 have been initially rejected under 35 U.S.C. §103(a) as being unpatentable over Wallace. Claims 3, 13, 27, 28, 31, and 32 have been initially rejected under 35 U.S.C. §103(a) as being unpatentable over Wallace in view of U.S. Pat. No. 5,885,245 to Lynch et al. ("Lynch"). Applicants respectfully traverse this rejection.

By this Response, Applicants amended Claims 1, 11, 21, 30, 35 and 36. Accordingly, Claims 1, 3, 8-13, 18-21, 24 and 26-37 are at issue.

Claims 1, 11, 21, 30, 35 and 36 have been amended to more clearly define the present invention and to distinguish from the Wallace invention. In the amended claims, the routine of the controller that is responsive to a status of the programmable medical device to generate a display of a plurality of entry keys and for selectively displaying on the display device only those keys which are required by the status for inputting commands to the programmable medical device *is dynamic, and takes place during each phase of control or programming*. The amendment is supported by the specification that during each mode of operation of the programmable medical device by the remote controller, the selectable graphical interface or key display program interacts with the medical device's operational program to display, highlight or otherwise distinguished from the remaining keys on the input device only those keys which are valid or needed for operation during the particular mode based on the determined status. This control of the key display is not static, and takes place during each particular programming or operational step, and during each phase of control or programming. (See page 4, lines 14-20, page 6, lines 5-7, and page 11, lines 25-31).

Applicants believe that independent Claims 1, 11, 21, 30, 35 and 36, as amended, as well as all dependent claims, are patentably distinguishable from Wallace and from Wallace in view

of Lynch. Thus, Applicants respectfully submit Claims 1, 3, 8-13, 18-21, 24, and 26-37 are in condition for allowance and request the Examiner to withdraw the rejection of the claims.

I. Rejection of Claims 1, 8, 9, 11, 12, 18-21, 24, 26, 30, and 33-36 Under 35 U.S.C. §102

The Examiner rejected Claims 1, 8, 9, 11, 12, 18-21, 24, 26, 30, and 33-36 under §102(e) as being anticipated by Wallace. The Examiner contends that Wallace teaches all the claimed subject matter including a device that selectively displays controller buttons on a touch screen display according to the status of the medical device; and Wallace also teaches that the controller is remote from the medical device and teaches that the controller has memory, status indicators, and a display. Applicants respectfully traverse these rejections.

A. A device that selectively displays controller buttons on a touch screen display according to the status of the medical device:

The present invention is distinctly distinguished from Wallace in two respects: (1) the controller, also referred to as the graphical user interface, of the present invention obtains the status of a medical device and then selectively displays/enables certain display keys based on the status, as opposed to the Wallace invention where the display of the screen to control the ventilator is based on user inputs; and (2) as amended, the routine of the controller of the present invention that is responsive to a status of the programmable medical device to generate a display of a plurality of entry keys and for selectively displaying on the display device only those keys which are required by the status for inputting commands to the programmable medical device is dynamic and takes place during each phase of control or programming, as opposed to the Wallace invention where the control of the screen display by the status of the ventilator is static and very limited in scope.

1. Controller responsive to status of medical device vs. user inputs

As indicated in the independent claims 1, 11, 21, 30, 35, and 36 and in the specification of the present invention, the controller or graphic user interface *obtains the status of a medical device* and then selectively displays and/or enables the display keys on the display screen *based on the status of the medical device*. This process is the result of a routine programmed in the controller. User input is not necessary. The process is described in the specification of the application: "Referring to Fig. 8, in step 803 the selectable graphic interface program determines the pump status. In Step 804, using the pump status, the selectable graphic interface program determines the display of the appropriate keys for the particular pump status, for example program, test, data input and the like. Finally, in step 805, the selectable graphical interface program causes the appropriate active keys to be displayed, highlighted or otherwise made active" (page 11, lines 19-31).

Conversely, the Wallace invention is intended for the user to provide inputs in order to display the next screen with appropriate control buttons. While the processor controls the displaying of a plurality of screens, the processor requires user inputs for the display of the screen, not from feedback of the ventilator. Fig. 4 in the Wallace patent is a schematic diagram, primarily in block form, of the sequence of display screens typically displayed by the graphic user interface. The flow chart clearly indicates the control of the display of the screens is uni-directional without any feedback from the ventilator. There are numerous examples of screen displays controlled by user inputs cited in the specification of Wallace. For example, once the ventilator starts up, "A message instructing the user as to what action to take next is displayed in the prompt area 190" (col. 9, lines 58-59). "The information area 160 of the ventilator startup screen 200 provides the user with three on-screen buttons to choose from to initiate the next step in completing the setup of the graphic user interface" (col. 10, lines 5-8). "When the NEW PATIENT on-screen button 230 is touched, the processor 30 responds by displaying a new patient setup screen" (col. 11, lines 5-7). "For example, if the user selects "A/C" mode and "PC"

mandatory type, the processor 30 will display on-screen buttons for changing ventilator settings related to pressure control of the ventilation” (Col. 12, lines 50-53).

2. Dynamic vs. Static Response

As amended, the routine of the controller or graphical user interface of the present invention that is responsive to a status of the programmable medical device to generate a display of a plurality of entry keys and for selectively displaying on the display device only those keys which are required by the status for inputting commands to the programmable medical device is dynamic and takes place during each phase of control or programming. The dynamic screen display changes based on the status of the medical device during the entire operation of the medical device.

Conversely, the screen displays of control buttons of Wallace are not altered during the operation of ventilation based on changes in the status of the ventilator. Instead, the screen displays are based on inputs from the user. Wallace never suggests, discloses, or teaches to obtain the status of the medical device to change the screen displays to control the device during the operation of the device. While Wallace has the capability to receive information from the device, such as clinical information of the patient and the parameters of the operation of the ventilator, this data is merely displayed on the screen to provide information, such as alarm messages, to the user. The information from the device during the operation of the device, however, does not control the screen display with appropriate buttons to control the device. Because the relevant scope of Wallace is limited to receiving user inputs and the main objective of Wallace, as evidenced by the title of the patent “System and Method for Setting and Displaying Ventilator Alarms,” is to generate alarm messages during the operation of the device, it is clear that Wallace never considers the capability of requesting, obtaining and utilizing ventilator status information to not only generate a display of control buttons, but further to

selectively display/enable those buttons based on the retrieved ventilator status information during the operation of the device.

B. The Controller is Remote from the Medical Device

Independent claim 30 of the present invention cites a programmable device having a remote controller for monitoring and controlling the programmable medical device. Wallace does not disclose or teach that the controller is remote from the medical device. In the contrary, Fig. 1 indicates that the respirator 22 is physically connected to the controller or graphic interface 20. This is also disclosed in DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS: “a ventilator system 10 having a graphic user interface 20 connected to and controlling a breath delivery unit” (col. 5, lines 55-57). There is no suggestion in Wallace to connect the controller to the ventilator via modems or other means of communication. A ventilator is normally used in a hospital setting, such as the critical care unit, in which the patient requires close monitoring and medical attentions. It is unlikely that a ventilator is used in a remote location other than the hospital, such as a patient’s home. There is no incentive or motivation to have the controller for the ventilator to be located in a remote location from the ventilator.

C. Legal Analysis of §102 Rejections

In order for a reference to act as a §102 bar to patentability, the reference must teach each and every element of the claimed invention. Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 771 (Fed. Cir. 1983). As explained in detail above, Applicants respectfully submit that Wallace does not teach all the claimed subject matter as amended in independent Claims 1, 11, 21, 30, 35, and 36. Specifically, Wallace does not disclose a device that selectively displays controller buttons on a touch screen display according to the status of the medical device during each phase of control or programming, nor does Wallace disclose a controller that is remote from the

medical device. Since Wallace does not disclose each and every element of Claims 1, 11, 21, 30, 35 and 36, Wallace cannot anticipate these claims or any claim dependent on them, i.e. Claims 8, 9, 12, 18-20, 24, 26, 33, and 34. As such, Applicants submit that Wallace does not anticipate Claims 1, 8, 9, 11, 12, 18-21, 24, 26, 30, and 33-36, and as such, all claims are patentable over Wallace.

II. Rejection of Claims Under §103

Claims 10 and 29 have been initially rejected under 35 U.S.C. §103(a) as being unpatentable over Wallace. Claims 3, 13, 27, 28, 31, and 32 have been initially rejected under 35 U.S.C. §103(a) as being unpatentable over Wallace in view of Lynch. Applicants respectfully traverse these rejections.

As discussed in the previous section, Applicants have shown that Claims 1, 11, 21, 30, 35 and 36, as amended, are patentably distinguishable from Wallace. Claims 3 and 10 depend from Claim 1; Claim 13 depends from Claim 11; Claims 27-29 depend from Claim 21, and Claims 31 and 32 depend from Claim 30. These dependent claims include all of the limitations of the respective independent claims and are, therefore, patentably distinguishable from Wallace and patentably distinguishable from Wallace in view of Lynch. If an independent claim is non-obvious under §103, then any claim depending therefrom is also non-obvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). As such, Applicants respectfully submit that Claims 10 and 29 are patentable over Wallace, and that Claims 3, 13, 27, 28, 31, and 32 are patentable over Wallace in view of Lynch.

III. Conclusion

For the above reasons, Applicants respectfully request the Examiner to reconsider and withdraw his initial rejection of the claims under §§ 102(e) and 103(a). In view of the amendments made herein and the foregoing remarks, Applicants submit this application is in

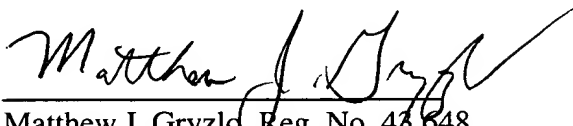
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condition for allowance. Such action is respectfully requested. The Examiner is requested to contact the undersigned if the Examiner has any questions concerning this Reply.

Respectfully submitted,

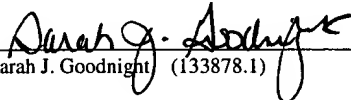
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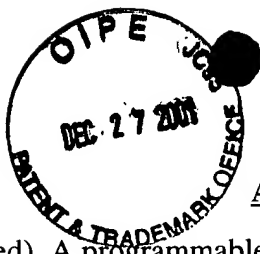
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APPENDIX A: Marked-up Claims

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1 (Amended). A programmable medical device, comprising:

- a display device;
- an input device for allowing a user to input commands to control the programmable medical device, the input device comprising:

- a routine, responsive to a status of the programmable medical device, for generating a display of a plurality of entry keys disposed in a spatial configuration and for selectively displaying on the display device only those entry keys which are required by the status for inputting commands to the programmable medical device during each phase of control or programming; and

- a selector for allowing a user to activate the displayed keys to allow the user to input commands to control operation of the programmable medical device.

11 (Amended). A programmable medical device, comprising:

- a display device;
- an input device for allowing a user to input commands to control the programmable medical device, the input device comprising:

- a plurality of entry keys disposed in a spatial configuration;
 - a routine, responsive to a status of the programmable medical device, for selectively enabling only those entry keys which are required by the status for inputting commands to the programmable medical device during each phase of control or programming.

21 (Amended). A controller for controlling a programmable medical device comprising:

- a display device;
- a routine, responsive to a status of the programmable medical device, for generating a display of a plurality of entry keys disposed in a spatial configuration and for selectively displaying on the display device only those entry keys which are required by the status for inputting commands to the programmable medical device during each phase of control or programming; and

a selector for allowing a user to activate the displayed keys to allow the user to input commands to control operation of the programmable medical device.

30 (Amended). A medical apparatus comprising:

a programmable medical device, the programmable medical device being disposed at a first location and comprising:

an input device for allowing a user to input commands to control the medical device, the input device having a plurality of entry keys disposed in a spatial configuration; and

a remote controller for monitoring and controlling the programmable medical device, the remote controller being positionable at a second location remote from the first location but in communication therewith, the remote controller comprising:

a display device;

a routine, responsive to a status of the programmable medical device, for generating a display of a plurality of virtual entry keys disposed in a spatial configuration and for selectively displaying on the display device only those virtual entry keys which are required by the status for inputting commands to the programmable medical device during each phase of control or programming; and

a selector for allowing a user to activate the displayed virtual entry keys to allow the user to input commands to control operation of the programmable medical device.

35 (Amended). A method for controlling a programmable medical device, the programmable medical device having a display device, an input device for allowing a user to input commands to control the programmable medical device, the input device having [comprising:] a routine, responsive to a status of the programmable medical device, for generating a display of a plurality of entry keys disposed in a spatial configuration and for selectively displaying on the display device only those entry keys which are required by the status for inputting commands to the programmable medical device; and a selector for allowing a user to activate the displayed keys to allow the user to input commands to control operation of the programmable medical device, comprising the steps of:

determining the status of the programmable medical treatment device during each phase of control or programming;

selecting those entry keys which are required by the status for inputting commands to the programmable medical device; and

displaying only those entry keys which are required by the status for inputting commands to the programmable medical device.

36 (Amended). A method for controlling a programmable medical device, the programmable medical device having a display device, an input device for allowing a user to input commands to control the programmable medical device, the input device having [comprising:] a plurality of entry keys disposed in a spatial configuration; and a routine, responsive to a status of the programmable medical device, for selectively enabling only those entry keys which are required by the status for inputting commands to the programmable medical device comprising:

determining the status of the programmable medical device during each phase of control or programming ;

selecting those entry keys which are required by the status for inputting commands to the programmable medical device; and

enabling only those entry key which are required by the status for inputting commands to the programmable medical device.